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BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

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IN THE MATTER OF:	:	Docket Numbers
ELECTRICITY MARKET DESIGN AND STRUCTURE	:	RM01-12-000
(RTO COST BENEFIT ANALYSIS REPORT)	:	RT01-2-000
	:	RT01-10-000
	:	RT01-15-000
	:	ER02-323-000
	:	RT01-34-000
	:	RT01-35-000
	:	RT01-67-000
	:	RT01-74-000
	:	RT01-75-000
	:	RT01-77-000
	:	RT01-85-000
	:	RT01-86-000
	:	RT01-87-000
	:	RT01-88-000
	:	RT01-94-000
	:	RT01-95-000
	:	RT01-98-000
	:	RT01-99-000
	:	RT01-100-000

-- continued --

- 1 : RT01-101-000
- 2 : EC01-146-000
- 3 : ER01-3000-000
- 4 : RT02-1-000
- 5 : EL02-9-000
- 6 : EC01-156-000
- 7 : ER01-3154-000
- 8 : EL01-80-000

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10 WESTERN STATE COMMISSIONERS

11 REGIONAL TELECONFERENCE

12

13 Hearing Room 11H-7

14 Federal Energy Regulatory

15 Commission

16 888 First Street, NE

17 Washington, D.C.

18

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20 Friday, March 15, 2002

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22 The above-entitled matter came on for teleconference,

23 pursuant to notice, at 2:05 p.m.

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## P R O C E E D I N G S

(2:05 p.m.)

MR. MEYERS: Hi, there. This is Ed Meyers. We have five minutes' worth of trouble trying to get through, but how is everybody doing?

UNIDENTIFIED SPEAKER: Good.

MR. MEYERS: Great.

UNIDENTIFIED SPEAKER: Glad you could get through.

MR. MEYERS: I understand we have a about 12 people here, so maybe we will have some more joining us, but these calls tend to be fairly intensive.

So we will just jump right into it. I would like to welcome everybody again. The purpose of this call is to answer questions and to discuss the Cost/Benefit Study released by the FERC at its open meeting of February 27th, 2002.

We are going to hopefully use this call to help you prepare your comments when you file them on April 9th and April 23rd, and they will help us all in conducting the State-Federal-Regional Panels coming up in the various regions. We may have one in late April in the Western States.

We don't plan to really have a presentation here. We are just going to have Q&As and any comments that you

1 care to make.

2 We are following the November 9th Order of the  
3 FERC here of 2001, which means that we have provided the  
4 notice on this teleconference and we are transcribing it.

5 So as we get into the call, if you would just  
6 introduce your names before you speak. Right now what I  
7 would like to do is go around the table and see if we can  
8 get everybody here who is from the FERC staff. And we do  
9 have a guest with us from California. And then we will have  
10 a roll call of the States.

11 Again, I am Ed Meyers, Director of State  
12 Relations here at the FERC.

13 MS. MORTON: Mary Morton with Commissioner  
14 Brownell's office.

15 MR. WHITMORE: I'm Charlie Whitmore. I do  
16 strategic planning at FERC.

17 MR. TURNURE: This is Jim Turnure with ICF  
18 Consulting. I was the project manager for the Cost/Benefit  
19 Analysis.

20 MR. MCCrackEN: Chris McCracken with ICF  
21 Consulting.

22 MR. SOTO: Andrew Soto from the Chairman's  
23 office.

24 MR. GALLAGHER: I am Sean Gallagher from the  
25 California Commission. I am in the room in person.

1 MR. MEYERS: Right. Glad you're here.

2 MR. RUSSO: Tom Russo. I'm with the Commission.  
3 I am assisting Ed Meyers with the State Relations Program.

4 MR. GOLDENBERG: I am Michael Goldenberg. I am  
5 with the Office of the General Counsel.

6 MR. MEYERS: All right, thank you.

7 Let's now hear from the States to see who is with  
8 us, starting with Arizona.

9 MR. SMITH: Arizona is represented by Jerry Smith  
10 of staff, and Paul Walker with Commissioner Spitzer's  
11 office.

12 MR. MEYERS: Okay. Thank you.

13 California?

14 MR. HENDRIE: James Hendrie with Strategic  
15 Planning. And then Sean, who I guess is at the meeting.

16 MR. LOWEN: This is James Lowen also at  
17 California PUC.

18 MR. MEYERS: Fine. Thank you.

19 Idaho, please?

20 MR. EASTLAKE: Bill Eastlake from Staff. And I  
21 Expect Commissioner Hansen may arrive for part of it. Thank  
22 you.

23 MR. MEYERS: Thank you.

24 Montana?

25 MR. VICK: (Inaudible.)

1 THE REPORTER: Could he start again, please?

2 MR. MEYERS: Could you please start again. We  
3 have trouble picking you up.

4 MR. VICK: Steve Vick, with the Montana Public  
5 Service Commission staff. And Chairman Freland is also  
6 here.

7 MR. MEYERS: Great.

8 MR. VICK: And our policy advisor, Susan Goode.

9 MS. GOODE: Hi, Ed.

10 MR. MEYERS: Hi.

11 Let see. New Mexico, please?

12 MR. HUGHES: Herb Hughes, Public Regulation  
13 Commissioner.

14 MR. MEYERS: Great.

15 MS. RIVERA: And I'm Betty Rivera, the new  
16 Secretary of Energy and Minerals for the State of New  
17 Mexico. Hey, Ed.

18 MR. MEYERS: Thank you. Hi.

19 Nevada, please?

20 MR. LINVILLE: This is Carl Linville. I am with  
21 the Governor's Office. The Commissioners weren't able to  
22 join, so I am sitting in for them.

23 MR. MEYERS: Thank you.

24 Oregon?

25 MR. BEYER: Commissioner Lee Beyer, joined by

1 Commissioner Joan Smith and Stephan Brown from staff.

2 MR. MEYERS: Great. Thank you.

3 Do we have Texas?

4 (No response.)

5 MR. MEYERS: Utah, please?

6 (No response.)

7 MR. MEYERS: No one from Utah.

8 Washington State?

9 MS. SHOWALTER: This is Marilyn Showalter. I'm  
10 the Chair of the Commission, and both Commissioner Dick  
11 Hemstad and Commissioner Pat Oshie are with me, and also  
12 Nick Garcia of our staff.

13 MR. MEYERS: Terrific.

14 Wyoming?

15 MR. FURTNEY: This is Commissioner Steve Furtney,  
16 and I have Brice Freeman with me.

17 MR. MEYERS: Okay. Is there anybody else who is  
18 on the call?

19 MR. SCHMITZ: Colorado PUC. My name is Gary  
20 Schmitz from staff. Commissioner Polly Page is here, and we  
21 have other staff members Wendell Winger, Wendy Alstadt,  
22 Barry Santos Rock, Larry Shou, and Inez Dominguez.

23 MR. MEYERS: Terrific.

24 MR. WENTZ: And Chris Wentz. I'm staff to Betty  
25 Rivera with the New Mexico Energy Minerals and Natural

1 Resources Department.

2 THE REPORTER: Could he spell his name, please?

3 MR. WENTZ: Yes. W-E-N-T-Z.

4 MR. MEYERS: All right. Anybody else?

5 MR. LeKANG: I'm Don LeKang. I'm with FERC staff  
6 and I'm calling in.

7 MR. MEYERS: Thanks, Don. Is that about it?

8 UNIDENTIFIED SPEAKER: --on the call.

9 MR. MEYERS: Hello, Bob.

10 Is that about it, then?

11 MR. GRAY: Chuck Gray, NERUC.

12 MR. MEYERS: Oh, hi, Chuck.

13 THE REPORTER: I didn't hear him.

14 MR. MEYERS: Chuck Gray, NERUC.

15 Thank you all for joining, and we have a couple  
16 of hours set aside for this. So let's just jump in right  
17 now with any questions or comments that you may have.

18 We have a team of people here hoping to help you.

19 MR. HUGHES: Well I'll jump in. Herb Hughes, New  
20 Mexico.

21 Where does everything stand right now in terms of  
22 reaction to the study? What kind of comments have you  
23 received thus far?

24 MR. MEYERS: This is the fourth of our regional  
25 conferences, and so we have had a variety of calls. Just to



1       characterize them, obviously people have made their comments  
2       and also a number of requests.

3               The requests have been broken down into probably  
4       two parts: things we can handle pretty much right away; and  
5       we're going to try to get some things out to everybody along  
6       those lines. For example, assumptions made by the study  
7       coordinators, maybe 50 or 60 assumptions that went into the  
8       study, and a variety of other items like that.

9               And probably the second category would be maybe  
10       additional computer runs, scenarios, that type of thing,  
11       wondering who is in what potential RTO, that type of thing.  
12       And that is going to require some thoughtful consideration  
13       as we go forward.

14               We will be thinking about these requests as they  
15       come out of the calls, plus you all will be filing on April  
16       9th and making a number of requests we would assume there  
17       for additional computer runs--

18               (A fax machine signal is heard on the line.)

19               MR. MEYERS: --or what have you.

20               Hello, there?

21               MR. HUGHES: Yes.

22               MR. MEYERS: --or what have you.

23               So does that answer your question?

24               MR. HUGHES: There's some interference on here.

25               (Line continues to make "modem" noise.)

1 MR. MEYERS: What the heck is that?

2 (Discussion off the record.)

3 MR. MEYERS: Hello?

4 MR. HUGHES: Hello.

5 MR. MEYERS: We're all back?

6 MR. HUGHES: Yes. This is Herb Hughes again. I  
7 just had a quick follow-up question.

8 MR. MEYERS: That's fine.

9 MR. HUGHES: I don't want to dominate this. I  
10 just wonder what is the time frame? Has there been any  
11 shift in FERC's view in particular of the time frames for  
12 all of this, or not?

13 MR. MEYERS: There's been no shifts.

14 MR. HUGHES: Okay.

15 MS. SHOWALTER: This is Marilyn Showalter.

16 Before the questions get down to certain level of detail,  
17 which maybe they will, I guess my general comment is that at  
18 least thus far as I see it that this is a case where the  
19 assumptions going into the model are virtually everything.

20 I listened to the presentation when the model was  
21 unveiled and I recall the comments by the presenters that  
22 the model itself is an efficient one, and so first the model  
23 was altered to reflect the inefficiencies in the current  
24 system, and then those inefficiencies were taken out to  
25 reflect what could happen in an RTO if the RTO were more

1 efficient.

2           It seemed to me almost tautological. Normally,  
3 when you put inputs into a model the inputs themselves are  
4 things that you can control. So you say if I do A, or if I  
5 do B, or if I do C and put those inputs into the model, what  
6 comes out at the other end?

7           But it seems to me, and I would like to either  
8 hear comments now or study this more, but it seems to me  
9 that in this case primarily what happened were not inputs  
10 that can be controlled that go into a model but rather  
11 assumptions that actually can't be controlled that then come  
12 out almost unchanged at the other side of the model, leaving  
13 the fundamental question which is can an RTO, however it is  
14 structured, achieve these inefficiencies--or excuse me,  
15 these efficiencies?

16           It doesn't show that the RTO will produce them.  
17 It only will produce them if it can produce them, which is  
18 outside the model itself.

19           I would like some feedback on that observation.

20           MR. TURNURE: Well--this is Jim Turnure from ICF  
21 Consulting. I can address parts of that, and then parts of  
22 it may be better suited for discussions with the Commission.

23           This economic assessment essentially takes the  
24 benefits' discussion from FERC's Order 2000 as the starting  
25 point. And just for other folks on the phone, the benefits'

1 discussion in the NOPR, the Notice of Proposed Rulemaking  
2 for Order 2000, is a much more extended staff discussion of  
3 benefits than the final rule for Order 2000 which is mainly  
4 responses to comments, and in rather more summary form.

5 Part of the issue you are raising has to do with  
6 an issue which was raised a number of times by state  
7 commissioners and others in this process having to do with  
8 when do you achieve whole market competitiveness?

9 At the Commission, that relates to the question  
10 of what is standard market design versus what is RTO scope,  
11 and those rulemakings have become more distinct over time.

12 We have decided in this study to distinguish  
13 between types of benefits that could come out of RTOs making  
14 the effort to clarify where the bang for the buck comes from  
15 as this process moves forward.

16 If you want to get into a debate about evidence  
17 and proof and that sort of thing, that is a different kind  
18 of assessment. And you could, for example, attempt to do  
19 statistical analysis of competitive markets around the world  
20 and take a look at that in a sort of a retrospective sense,  
21 or a statistical sense. That is a type of analysis that has  
22 occasionally been looked at.

23 I haven't seen anything comprehensive enough that  
24 we could point to it in this context and make firm  
25 statements about those connections.

1                   Is that a good starting point at least?

2                   MS. SHOWALTER: Well I guess. Maybe it's--if the  
3 results of the study are taken to mean that, for example,  
4 that an RTO can save point seven percent generation costs on  
5 transmission-only models, well is it anything about the  
6 model or the study that is showing that? Or is it simply no  
7 more than the assumptions you put in?

8                   In other words, if you start with an efficient  
9 model and you alter the model to reflect what you perceive  
10 to be inefficiencies in the current system, then you remove  
11 those to reflect what you perceive to be an efficient  
12 system, all you have done is put the assumption in, or take  
13 it out, or put the inefficiency in, take it out, and lo and  
14 behold your original model shows something that is more  
15 efficient than the model showed when you put in the  
16 inefficiency.

17                   But it doesn't get at whether an RTO can actually  
18 deliver that more efficient system. That is my--that is the  
19 issue I am getting at because I think that the general  
20 purpose of the Cost/Benefit Study was: Will RTOs be more  
21 efficient than the current system?

22                   And it seems like, subject to your correcting me  
23 and I would be happy to hear it, what this study does is it  
24 doesn't show one way or another if RTOs are going to produce  
25 efficiencies; it says if an RTO eliminates the efficiency

1       that we have posited for the current system, then it will be  
2       more efficient. And that is the tautology I'm talking  
3       about, which seems to me distinguishable from most  
4       cost/benefit studies where you are putting in variables  
5       somewhat subject to your control, defining what are we going  
6       to do about this variable, and you massage it with whatever  
7       model you think is going to--the real world would do to it.  
8       And then you get your answer. Oh, we ought to do inputs A  
9       and B, but not C and D because we won't get more efficiency.

10               But if you take this study and say, well, what  
11       should we do as a result of this study, there is not much  
12       you can do because all that has happened is you've made  
13       certain assumptions about the inefficiency of the current  
14       system versus a potential efficiency of another system.

15               But where does it lead?

16               MR. WHITMORE: This is Charlie Whitmore at FERC.  
17       I think that is a very good question. I'm not sure that  
18       I'll answer it, but let me give some reflections as best I  
19       understand how this study worked.

20               In the first place, I think it is pretty clear  
21       that the issue all along has been our belief that increasing  
22       competition would lead to greater benefits, greater  
23       efficiencies and so forth. And that is, the issue of  
24       whether RTOs are necessary to get greater competition and  
25       would have that effect is not something that the study

1 examines directly.

2 The presumption on our part has been that RTOs  
3 are the necessary platform that has to be in place in order  
4 to be able to get those efficiencies.

5 Now more specifically, when you are talking about  
6 assuming inefficiencies and then backing them off, that  
7 applies essentially only to the transmission-only case and  
8 has to do with how efficiently the transmission operates, or  
9 it applies primarily to that one.

10 And I think one of the interesting answers that  
11 came out of that was that the inefficiencies in the  
12 transmission grid per se are relatively small as compared  
13 with other gains that could be made.

14 Now the study, as I understand it, basically says  
15 that while there might be \$6 billion in benefits from the  
16 transmission improvements that would come from RTOs, there  
17 are \$34 billion or so that could come from improved  
18 generation because greater competition makes that more  
19 efficient, and \$20 billion from increased Demand Response.

20 Now in those cases I think what the study amounts  
21 to is a fairly conservative set of assumptions about how  
22 much increased efficiency you would get from those things.

23 In the case of generation, in effect what it does  
24 is to say that all the currently inefficient plants, the  
25 ones that are not operating terribly near to best practice

1 in the industry, would move somewhat closer to best  
2 practice. It wouldn't get all the way there, by any means,  
3 but it would move somewhat closer.

4 And in the case of Demand Response, it's a  
5 relatively small short-run Demand Response. Now it is true  
6 that those are assumptions, and I don't think that the study  
7 set out to or could ever prove that RTOs would create those  
8 efficiencies. That is something that if the RTOs are well  
9 designed, that is what they are intended to do. And there  
10 can be lots of arguments about whether they in fact would  
11 achieve that, whether a given proposal would.

12 I do think that the study in effect said that the  
13 place to be concentrating here, presumably if you believe  
14 the numbers, is not so much on greater transmission  
15 efficiencies per se but on making sure the competition is  
16 working in the market.

17 And I have no idea how these things happen at the  
18 Commission. I wasn't close enough to them. But I would  
19 simply note that the Standard Market Design proposals are  
20 moving along at a fairly rapid clip and that would certainly  
21 be consistent with the notion that that is where the biggest  
22 bang for the buck lies.

23 MR. TURNURE: I don't know how long we need to  
24 discuss this point--this is Jim Turnure again at ICF--but I  
25 would just point out that the study I think tried to



1 recognize the philosophical or methodological limits, and  
2 you can make the point you are making and have a very good  
3 discussion about that.

4 I think we said on page 77 the wide range of  
5 potential economic benefits assessed here indicate  
6 substantial uncertainty with regard to the exact mechanisms  
7 and magnitudes of policy-induced changes to the electric  
8 power system.

9 And we suggest further research would do little  
10 to narrow this range at the present time, although evidence  
11 from other industries and countries that have undertaken  
12 competitive market transitions can offer limited analogies  
13 and evidence.

14 I think that as sort of unfettered analysts we  
15 tend to end up with a fairly wide range of potential  
16 benefits here. I think that further if you look at the  
17 extensive literature on this issue going back to John Cowan  
18 Small's NC Markets For Power in the early 1980s and since  
19 then, that the directional trend towards efficiency when  
20 deregulation occurs in these types of marketplaces is a  
21 fairly pervasive assessment.

22 This is not a literature review, but that type of  
23 literature review could be undertaken if people felt they  
24 needed more evidence.

25 MR. GALLAGHER: Jim and Charlie, this is Sean

1       Gallagher from the California Commission. Let me say what I  
2       think I heard you guys say, which is that this study does  
3       not show that RTOs are necessary to bring about the benefits  
4       that are discussed in the study.

5               It doesn't show that RTOs are sufficient to bring  
6       about the benefits that are discussed in this study.

7               It doesn't quantify the costs of imposing RTOs on  
8       the country.

9               And it doesn't actually quantify the benefits  
10       that would result from having RTOs across the country. It  
11       just shows that--apparently what it shows is that if the  
12       benefits that were assumed result, then the benefits are  
13       more likely to result from improvements in generation  
14       competition than from efficiencies in transmission.

15               Is that about it?

16               MR. WHITMORE: I think that overstates what  
17       either one of us was saying by a fair degree.

18               MR. GALLAGHER: I apologize. I've been in a  
19       hearing room all week so I don't mean to cross-examine you.

20               (Laughter.)

21               MR. WHITMORE: That's okay. We're getting used  
22       to it.

23               (Laughter.)

24               MR. WHITMORE: First of all, I think the study  
25       does attempt to quantify the costs. And there is a

1 discussion in there about that.

2 Secondly, I think the purpose of RTOs is not to  
3 create RTOs. It is to create the platform on which  
4 competition can be built, at least better competition than  
5 is there today.

6 If you believe for some reason or other that RTOs  
7 can't or won't do that, then you're right. This doesn't say  
8 very much.

9 MR. GALLAGHER: Well I think the issue was not so  
10 much who believes what, but I thought the idea here was to  
11 try to give the states and other parties a sense of whether  
12 RTOs are likely to deliver the benefits that it is hoped  
13 will result from greater competition.

14 I am just having trouble seeing it.

15 MR. RUSSO: I think with respect to--this is Tom  
16 Russo--I think with respect to RTOs in general, things like  
17 transmission planing, we at the FERC have a very difficult  
18 time in our own minds thinking how regions can plan adequate  
19 transmission planning without a regional type of framework.

20 Now I think the report focuses on RTO policy. So  
21 what really constitutes RTO policy at FERC? I think it is  
22 much more than should we build or should we organize an RTO.  
23 Standard Market Design, and we sent information to the State  
24 Commissioners yesterday, is going to play an equal if not  
25 more important role in attaining some of these efficiencies.

1                   But I go back to transmission planning, which the  
2                   model does not factor into. Without an RTO, I don't know  
3                   how you get there.

4                   MR. MEYERS: Anyway, we are going to have a lot  
5                   of policy discussions emanating from this Cost/Benefit Study  
6                   down the line. Let's just try to get into the study itself,  
7                   if we could.

8                   I mean if you want to discuss the policy and so  
9                   forth, let's keep on going there. But--

10                  MR. HENDRIE: This is James Hendrie from  
11                  California. I have a question.

12                  When you look at the Executive Summary on the  
13                  first page, it says "The study seeks to be both  
14                  comprehensive and vigorous, employing sufficient  
15                  quantitative detail to accurately represent potential  
16                  outcomes of RTO policy."

17                  And I am trying to think what you're saying that,  
18                  sort of like, well, we're just running an assumption to get  
19                  a--you know, if you believe the assumption, it gets there.

20                  And so where is the sort of rigorous and  
21                  comprehensive parts of this?

22                  MR. TURNURE: Well--this is Jim Turner--I think  
23                  that the beginning of that answer lies in reading that word  
24                  "potential" again.

25                  We are employing a scenario analysis approach to

1       this issue. And scenario analysis by its nature has a sort  
2       of what-if flavor to it.

3               If you go and you look at other studies of this  
4       issue in this field, you will find that many of them employ  
5       scenario analysis in order to distinguish very detailed and  
6       complex interactions between the generation system and the  
7       transmission system, and fuel input markets and other  
8       markets.

9               For example, the study that RTO West is  
10       conducting with Tabors, Caramanus and Associates employees a  
11       number of scenarios to distinguish between the potential  
12       outcomes.

13              And that is in itself a large amount of  
14       information that I believe, and I think we believe as a  
15       firm, is valid.

16              The rigor comes into the sufficiency of the  
17       detail in the model you're representing, and we believe that  
18       the comprehensiveness in this case comes from being as  
19       direct and clear as we can about the entire context and what  
20       we are treating here directly in the model, and what we are  
21       treating as a separate quantitative analysis versus what we  
22       are not treating at all. Where does the analysis leave off?

23              In that regard, it is somewhat of a starting  
24       point you could say.

25              MR. WALKER: This is Paul Walker with

1 Commissioner Spitzer's office in Arizona. My question goes  
2 to the model. It is this:

3 I don't see in here any sort of sensitivity  
4 analysis. You say you have over 50 assumptions built in.  
5 In the modeling I'm familiar with, you would do a  
6 sensitivity analysis to analyze which of those assumptions,  
7 if not realized the way you think it will be, will most  
8 dramatically change the results.

9 So was that done? And where can I find that?

10 MR. TURNURE: This is Jim Turnure again. Well  
11 the scenarios here are generally sets of assumptions. You  
12 distinguish between scenario analysis and sensitivity  
13 analysis typically, at least this is sort of an analytic  
14 custom if you will, scenarios are sets of assumptions and  
15 sensitivity runs are variations in a single assumption to  
16 find out how sensitive the model is to that assumption, and  
17 effectively how robust your results are to different  
18 assumptions and different outcomes.

19 In this report, the only pure sensitivity--if  
20 you'd like to call it that--is the Demand Response case.  
21 Because that case just happens to be one in which only one  
22 assumption was changed.

23 And so that comes out effectively as a  
24 sensitivity to the Demand Response. Other sensitivities  
25 didn't fall within the scope of the resources or the time

1       that we were working with.

2               Normally you would--you always think of  
3       sensitivity you could run, and we are welcoming--I guess  
4       people are welcoming suggestions.

5               MR. BROWN:   his is Stephan Brown, Oregon staff.  
6       I have a couple of questions on the three scenarios.

7               MR. MEYERS:   Who is speaking, please?

8               MR. BROWN:   Stephan Brown, Oregon staff.

9               MR. MEYERS:   Brown, is it?

10              MR. BROWN:   Stephan Brown, yes.

11              It seems as if--you know, we talked a little bit  
12       earlier--it seems as if the big benefits are from the non-  
13       transmission cases, and it is not clear from the study or  
14       our discussion so far that the assumptions used to generate  
15       the benefits in the other two cases are attributable to  
16       creation of an RTO.

17              For example, the Demand Response case where you  
18       change--improve real-time pricing and time-of-use programs,  
19       it is not clear to me anyway why an RTO would improve those,  
20       or increase the usage of those programs.

21              Also, it is not clear in the transmission  
22       generation case why the RTO would decrease plant heat rates  
23       and increase plant availability, especially given that in  
24       the West we have a very effective and pretty widely used  
25       wholesale market.

1                   Can you address my concerns?

2                   MR. TURNURE: Well--this is Jim Turnure again--  
3           the basics of that answer are laid out in the initial  
4           section of the study in the regulatory context. There is a  
5           lot of sort of logical discussion of inefficiencies in the  
6           current markets and why there would be enhanced incentives  
7           for, among other things, generator performance and Demand  
8           Response.

9                   That is really the gist of that justification, if  
10          you will. Beyond that, there have been other requests for  
11          more backup for those particular assumptions and that is one  
12          of the immediate response items that we will be preparing in  
13          short order.

14                  So if you would like to talk about some of those  
15          particulars, we could do that, but if you want to be more  
16          specific that would be a good starting point.

17                  MR. BROWN: Well I look forward to seeing your  
18          responses to the request.

19                  I guess my--you know, you mentioned that you laid  
20          out the assumptions. I found the logic unconvincing.

21                  For example, the Demand Response programs are  
22          basically utility and state PUC level programs. You don't  
23          need--you could say, well, an efficient wholesale market  
24          could increase the, maybe the customer's believability that  
25          the utility would send them the right price signal or



1 something, but they don't seem to be directly tied to  
2 creation of an RTO.

3 MR. WHITMORE: This is Charlie Whitmore at FERC.  
4 I guess I would say a couple of things.

5 The first is that Demand Response is clearly a  
6 different animal here from the generator side, which is one  
7 of the reasons that it is put in separately so you can  
8 either--you can see how big the overall effect is from  
9 greater competition with it, and you can sort of decide for  
10 yourself how much of that is coming from the States and  
11 coming from other places.

12 The notion on the generator side of this is that  
13 if generators were highly competitive today, to the degree  
14 that they are there is not going to be very much effect in  
15 the way that this model was operating.

16 And, Jim, I don't know the details here so you  
17 are going to have to correct me on all this. But in effect  
18 what happens in the model I believe is that you take a given  
19 type of generator today and you look at the dispersion of  
20 how efficient they are, and you move the ones that are  
21 relatively less efficient up the efficiency curve to some  
22 degree.

23 So if they are already operating in a very high  
24 efficiency, and all of them are, then you're not going to  
25 get very much effect at all.

1                   So the implication of that is that, for whatever  
2 kinds of reasons, there are still considerable efficiencies  
3 to be wrung out of the system. And I think the question  
4 about comprehensive and quantitative, that part of this I  
5 think really is pretty comprehensive and quantitative.

6                   Now there is a separate issue in addition to that  
7 as to whether RTOs are either the necessary or sufficient  
8 condition that you need in order to have efficient markets.

9                   And that, you know, I guess we have different  
10 readings on what cost/benefit studies do. My sense is that  
11 a cost/benefit study takes a policy and looks at what it  
12 says it is trying to do, and asks the question whether, if  
13 it did succeed in doing that, what benefits would be had and  
14 how much it would cost.

15                  Now as part of that, you can also do a question  
16 of how likely is it to--whether the specific proposal you  
17 are talking about is really truly likely to get those  
18 benefits.

19                  That is really not done here. And I think we  
20 just have to accept that. We on the FERC side. But I don't  
21 think it is a tautology to go back to one of the early  
22 comments, I don't think it is a tautology to say, okay, it  
23 is intended to do this. If it succeeded, what would the  
24 benefits be?

25                  That is in effect what the study does.

1                   MR. HENDRIE: This is Jim Hendrie. I had a  
2 question on--and this may be up to Jim Turnure because I am  
3 hearing sort of two different things about how the  
4 efficiency is modeled.

5                   The study says that the efficiency is improved by  
6 6 percent for fossil-fueled units phased in over 6 years.  
7 And we are mostly hearing that there is some sort of  
8 reference benchline that units move toward.

9                   And so how is the efficiency specifically modeled  
10 in this study?

11                  MR. TURNURE: Okay. This is Jim Turnure. That  
12 particular heat rate improvement was sourced to previous  
13 work. And in particular, the environmental assessment work  
14 that the Commission carried out for Order 2000 at the time.  
15 Similar approaches were taken in other national analyses,  
16 particularly the Energy Department's Comprehensive  
17 Electricity Competition Act, or CECA analysis of the  
18 Administration's bill a few years ago. I believe it would  
19 have been either 1999 or 1998.

20                  MR. HENDRIE: So what is the methodology, though,  
21 I guess is the question.

22                  MR. TURNURE: The methodology falls under what  
23 you would call generally 'best-practice analysis,' which is  
24 fairly common in both engineering and sort of corporate  
25 financial contexts.

1           The general methodology would be: Take a look at  
2   a distribution of performance indicated across comparable  
3   entities or plants. So for heat rates in particular, you  
4   would divide up into consistent plant sites, and you would  
5   take a look at the spread, or the distribution of heat rates  
6   or thermal efficiencies across all those similar plants.

7           MR. HENDRIE: By "similar plants," is it just  
8   like combined-cycle combustion turbine, steam boilers, or  
9   are they age-adjusted, or are they--

10          MR. TURNURE: They can be both. They can be  
11   vintaged and they can be size-adjusted. So capacity  
12   categories and vintages. That's the general approach.

13          Then you have to decide a few things. Namely, if  
14   you're talking about best practice you certainly have the  
15   best unit. But it is my understanding or recollection of  
16   the methodologies that other studies have used that a more  
17   conservative approach would be to take for example the  
18   average of the top quartile, the top 25 percent of units,  
19   and you take that as your benchmark to which poorer  
20   performing units move over time.

21          You also have to decide how fast they are going  
22   to move, and if they are going to get there all the way or  
23   just part of the way. So that is the sort of thing people  
24   do when they come up with a number like a 6 percent overall  
25   improvement in heat rates.

1                   MR. HENDRIE: Okay. Because the study just says  
2 like one paragraph. It just says, you know, efficiency  
3 gains improved by one percent. So I think what might be  
4 useful is if you could provide some follow-up detail as to  
5 how the model specifically does this vintaging and age-  
6 adjusting and type adjustments.

7                   MR. TURNURE: Right. And when we have referenced  
8 other studies, sometimes it is more helpful for people if we  
9 actually go and get some information from those studies and  
10 provide that in sort of a summary form as well.

11                  MR. SCHMITZ: This is Gary Schmitz with the  
12 Colorado PUC. Just following up on that, do you have  
13 materials that you could give us to--I'm trying to not  
14 debate the policy again, but just backup or further  
15 discussion about these policy scenarios just so we can  
16 understand them better, not to debate them here, but just to  
17 get an understanding?

18                  Do you have that kind of material available? And  
19 how could we get that?

20                  MR. TURNURE: On the scenario development, you  
21 mean?

22                  MR. SCHMITZ: Yes. For example, the heat rate  
23 and the reserve margin changes, and the transmission  
24 capability, all those assumptions. And then you said you  
25 have a lot more that we haven't seen yet. You mentioned you

1 would get us material. What might we expect to see?

2 MR. TURNURE: This is Jim again, Jim Turnure at  
3 ICF Consulting. Essentially what goes on when we develop  
4 these types of analyses, one of the first thing that happens  
5 is the delivery of a fairly large assumptions document to  
6 the client. That contains usually a set of assumptions that  
7 we are proposing, and those are usually mostly oriented  
8 around the base-case development.

9 So lots of details about underlying market  
10 fundamentals like demand growth, gas prices, et cetera, et  
11 cetera, et cetera.

12 What we have done is we have taken that original  
13 assumptions' document and made some changes to it to reflect  
14 where we ended up, because the original delivery of that  
15 document was pretty early in this process.

16 So we are adding pieces to it that include  
17 further documentation of the scenario assumptions, in  
18 addition to the base-case assumptions.

19 MR. SCHMITZ: This is Gary Schmitz again. And  
20 you are going to provide that to us, then?

21 MR. MEYERS: What? The set of assumptions?

22 MR. RUSSO: Um-hmm.

23 MR. MEYERS: Yes. We're going to be doing that  
24 within, what, two or three business days.

25 MR. SCHMITZ: And do we need to give you e-mails,

1 or how will that occur?

2 MR. MEYERS: We're going to send them out to  
3 everybody. Everybody on the e-mail list.

4 MR. SCHMITZ: Okay, thank you.

5 MR. TURNURE: And it will be docketed? Is that  
6 right?

7 MR. MEYERS: They'll be docketed in the case.

8 MR. WHITMORE: They will be filed in all the  
9 relevant cases, and we also plan to put it up on our web  
10 site. This is Charlie Whitmore at FERC.

11 MR. SCHMITZ: And that will cover the  
12 assumptions. Then I was asking about the policy. Again, do  
13 you have further description of the policy cases?

14 MR. TURNURE: Further description beyond what is  
15 in the study?

16 MR. SCHMITZ: Yes.

17 MR. TURNURE: I'm not sure that we exactly do.  
18 Do you have something specific in mind?

19 MR. SCHMITZ: Well, for example, the previous  
20 question about how the heat rate is done. That was a nice  
21 discussion that you gave over the phone, but if we wanted to  
22 read that, do you have that written down somewhere?

23 MR. TURNURE: Oh, I see what you're saying. I  
24 thought you meant something about the specific  
25 configurations of the RTOs.

1                   We will make an attempt. This is a presentation-  
2 style assumptions document, so it is not a long narrative  
3 type of piece, but we will try to be as--we will try to  
4 include any numbers that are relevant. We will try to point  
5 to further sources of information that may be more  
6 narrative. For example, the Energy Department study I  
7 mentioned will certainly try to put in some of that.

8                   I'm not sure it will be a full-scale narrative  
9 approach, though.

10                  MR. WHITMORE: This is Charlie Whitmore. If I  
11 understand your question, it is will we have something that  
12 describes the assumptions that went into both the generation  
13 and transmission case on one hand, and the Demand Response  
14 case on the other? Is that--

15                  MR. SCHMITZ: Right. That would be helpful.

16                  MR. WHITMORE: Right. We are planning to do that  
17 as part of this package that comes out in two or three  
18 business days.

19                  MR. SCHMITZ: Okay. Thank you.

20                  MR. WHITMORE: At least an outline.

21                  MR. LOWEN: This is James Lowen from the CPUC. I  
22 wanted to just get a little bit more clear on the analysis  
23 here. I have understood that in the near future you are  
24 going to be publishing or sending out to us the assumptions  
25 that were made that were inputs into the model that then



1 delivered the various outcomes.

2 I don't want to belabor the point too much, but I  
3 am wondering if there is going to also be an explanation of  
4 how it is that the various assumptions are put together into  
5 these ensembles and why they get labeled an RTO case, or a  
6 transmission-only case, and what are the reasons for  
7 attaching those labels to the various parameter input  
8 assumptions.

9 MR. TURNURE: This is Jim turnure. Well that  
10 particular question hasn't really come up so far. There is  
11 in the assumptions document itself some of the same tables  
12 that describe the scenarios, and so forth, and I would be  
13 happy to take a stab at some more description.

14 There is some of that in the study. It is always  
15 a challenge in these studies to decide how big it should be  
16 and what level of information in the end is appropriate for  
17 people. So I can take another whack at that.

18 MR. LOWEN: I think that would be helpful.

19 MR. SMITH: This is Jerry Smith of Arizona staff.  
20 I would like to move for a moment beyond some of the  
21 assumption discussion ad address some of the conclusions  
22 from the report itself.

23 For the transmission-only scenario, if you can  
24 actually demonstrate the assumptions that accompany that are  
25 achievable. It is my sense that the transmission-only

1 scenario is a better reflection of the true benefit of an  
2 RTO.

3 I believe that the other scenarios are capturing  
4 benefits of market efficiency and how you manage your Demand  
5 Response. And if that is factual, I would suggest that  
6 maybe one of the concerns I would have is that in the  
7 transmission and generation scenario that we have not  
8 accurately captured the cost of the infrastructure required  
9 to achieve that generation scenario's efficiencies that are  
10 described for the \$60 billion.

11 In fact, the Western Governors Association's  
12 Transmission Report attributes \$8 to \$12 billion in the West  
13 alone to achieve the efficient energy benefits of expanding  
14 the generation scenarios more in line with what you have  
15 studied, I believe.

16 And the other comment I would make is that if the  
17 transmission-only scenario is reflective of the type of  
18 benefits that could be accrued with the formation of RTOs,  
19 it appears to certainly beg the question of to what degree  
20 there is any reason to continue a claim that size matters  
21 for RTOs.

22 Because the transmission-only scenario is six-  
23 fold greater impact than the sensitivity of the small to  
24 large RTO scenario.

25 I would welcome any feedback on those.

1           MR. TURNURE: Well there are a number of  
2 different folks here who could respond to parts of that.  
3 This is Jim Turnure at ICF. I'll just take a whack at some  
4 of the more analytically related points he made there.

5           We handled the cost of infrastructure in the  
6 context of RTO establishment, per se, which implies the  
7 operational control, the control rooms infrastructure,  
8 communications infrastructure, not the potential for  
9 transmission grid expansion properly speaking.

10           There are a couple of elements to that. I think  
11 that it is important to note that this, this modeling system  
12 could be used to assess economic expansions. That is to  
13 say, you can make a dynamic investment an option for the  
14 transmission side.

15           That is not a feature that's being exercised in  
16 this analysis, but it is a feature that the model carries.  
17 Generally when you're doing very large-scale, national scale  
18 analyses, that feature is not used mainly because the way  
19 that it would build transmission links across various  
20 regions of the country would be fairly aggressive.

21           There are a lot of economic links that could be  
22 improved. However, the political and other difficulties  
23 with transmission siting generally make that sort of  
24 approach unrealistic, and you would really be under a lot  
25 more criticism, I think, if you were building transmission

1 lines here and there across the nation in this model and  
2 calling that a forecast.

3 So you can learn a lot more about the value of  
4 transmission grid expansion using a model like this.  
5 However, for purposes of this study, that feature was not  
6 exercised.

7 So I think that the comparison with the Western  
8 Governors Association look at really large transmission  
9 backbones and expansion and moving power out of Wyoming and  
10 so forth. That is a different kind of comparison which  
11 could be made but isn't made here.

12 And let me just then comment briefly on the whole  
13 regional planning aspect of this. I think that one of the  
14 things that comes out of the study is in fact that people in  
15 particular states are affected by events that happen a long  
16 way off.

17 I think that the Western States are very well  
18 aware of that at this stage. And it just points that out  
19 again in a way which may have policy implications. And I'm  
20 not going to go there in this context, but it really does  
21 raise some interesting questions. And perhaps the  
22 Commission can pick up on some of that.

23 MR. WHITMORE: This is Charlie Whitmore at FERC.  
24 Just to add a comment on the size of the RTOs. I'm not sure  
25 that 6 to 1 is the right number, but certainly I think

1       anybody reading this report would say that it is saying that  
2       the size of RTOs is relatively unimportant compared to a  
3       variety of other things involved.

4               I think that is the important part of the  
5       findings here.

6               One caveat to that is that it didn't make any  
7       assumption as to whether you needed larger RTOs in order to  
8       get more competition in generation or not. And clearly the  
9       biggest gain in all of this is from increased competition in  
10      generation and the presumption--and again this goes back to  
11      an earlier discussion--but the presumption that we had was  
12      the whole purpose of an RTO is in large part to get better  
13      markets so that you have more efficient generation.

14              Now whether larger RTOs do more of that than  
15      smaller RTOs, the study doesn't address. And so that is  
16      just how it is. But that is a caveat. The main point is  
17      that the numbers for larger RTOs are not hugely better than  
18      the numbers for somewhat smaller RTOs.T

19              MS. SHOWALTER: This is Marilyn Showalter. As a  
20      follow-up to that point, I noticed that about the  
21      distinction between, you know, many RTOs and few, but isn't  
22      it really no more than a function of the model having  
23      idealized the efficiencies that an RTO will achieve?

24              So if you begin with your assumption that RTOs  
25      are more efficient, then they simply are more efficient.

1 And splitting it up into, you know, four or seven isn't  
2 going to make a difference because that idealization remains  
3 there.

4 I think that is, it seems to me, strictly a  
5 function of the model or the assumptions, not really  
6 anything else. It doesn't really prove in any sense that a  
7 big one or a few are the same or better or worse because  
8 you're just going to get out what you put in, which is the  
9 assumption that RTOs are more efficient.

10 MR. TURNURE: This is Jim Turnure again. And  
11 without going directly to the whole question of what would  
12 constitute proof in this context, which is a quite  
13 interesting discussion, I will just point out that we very  
14 clearly said in the study that if you can establish a link  
15 between RTO scope and market efficiencies in the generation  
16 side, then you would have a much different story and a much  
17 larger impact here.

18 We have not come across a good, solid way to say  
19 that you need to have X size of an RTO before the  
20 competitive incentives really start to bite.

21 The way you would think about that has to do with  
22 how many competing suppliers do you need to trigger  
23 effective arbitrage, price arbitrage in a downward direction  
24 such that everyone is really competing, and the less  
25 efficient units are really in jeopardy of losing their sales

1           and losing their position in the dispatch order.

2                       It is arguable that that could happen with as few  
3           as five to seven competing entities, but that becomes a  
4           market structure debate. And that becomes a market power  
5           debate. And in the long-run national forecasting context,  
6           that particular debate cannot really be resolved  
7           effectively.

8                       But just to point you in the direction of where  
9           you might think about that debate, it is possible that a  
10          small enough RTO simply would not have the kinds of inter-  
11          unit competition that you would need to put these sorts of  
12          incentives in play.

13                      MR. HENDRIE: This is Jim Hendrie from  
14          California. This study did not look at the market power and  
15          assume there would be no market power? Is that correct?

16                      MR. TURNURE: I'm sorry, we missed your  
17          identification.

18                      MR. HENDRIE: Jim Hendrie from California. This  
19          study said it did not look to market power and assume there  
20          would be no market power? Correct?

21                      MR. TURNURE: Right. Exactly.

22                      MR. HENDRIE: And I guess it also assumes that  
23          the RTOs kind of serve as a central dispatch function and  
24          dispatch units from the least cost to the highest cost to  
25          meet demand based on their operating characteristics as

1 modeled? Right?

2 MR. TURNURE: Also correct, yes.

3 MR. HENDRIE: And a somewhat technical question,  
4 if you don't mind. I'd like to follow up on how the model  
5 does capacity additions over time. So the model just kind  
6 of looks out in the future and keeps adding new units on  
7 line to keep the operating reserves at 15 percent?

8 MR. TURNURE: It looks out over time and makes  
9 efficient additions to keep reserve margin requirements at  
10 whatever level you set them at.

11 It also has the capability to share capacity  
12 across regions, so that there is reserve sharing basically  
13 going on, too. There is a separate capacity in energy  
14 market clearing in the model.

15 MR. HENDRIE: So when you have the model running  
16 it out, it basically--I mean is it fair to describe it as  
17 sort of an omniscient central planner that makes sure that  
18 there's always 15 percent reserves at any given point in  
19 time, either on a regional basis or inter-regional?

20 MR. TURNURE: That's right. You can simulate  
21 over- and under-build conditions with this sort of model,  
22 but that is not something we are doing here, except to the  
23 extent that we're including firmly planned builds which can  
24 push some regions above their reserve margin requirements in  
25 the initial years.



1                   MR. HENDRIE: Okay, so there's no--so when you  
2 look at sort of costs and production costs, there is no lost  
3 load cost, no LOLP cost or anything like that?

4                   MR. TURNURE: Um, unless I'm missing something  
5 here, I don't think so. The question of assessing reserve  
6 margins and what your peak capacity price is has more to do  
7 with replacement costs, really, than it does with outages.

8                   MR. HENDRIE: Okay, so I just want to be clear,  
9 so the model kind of continually adds capacity so that  
10 you'll always meet the 15 percent reserve margin, and the  
11 model then at no point in time would portray a region where  
12 capacity reserves could drop down below 15 percent?

13                  MR. TURNURE: The way it's implemented here, yes.  
14 And that's a fairly standard mode of implementation. You  
15 can do peak capacity pricing and LLLP sorts of work with  
16 this model. It tends to turn into a shorter run type of  
17 analysis because you want more time segment detail.

18                  MR. HENDRIE: So this model could give you sort  
19 of peak prices. In other words, what peak prices might look  
20 like. But that would be short-term and the model didn't run  
21 it?

22                  MR. TURNURE: Well the--

23                  MR. HENDRIE: Since you're looking at long term.

24                  MR. TURNURE: Yes, there are tradeoffs you make  
25 when you configure the model. And in this context we have,

1 is it seven demand segments?

2 MR. MacCRACKEN: I think it is 10 in this  
3 context.

4 MR. TURNURE: Ten demand segments. So you would  
5 be capturing a pretty good look at the peak, but it sort of  
6 is a long-run peak and you could do more time detail if you  
7 took a shorter horizon or a more specific geographic focus.

8 MR. HENDRIE: Okay.

9 MR. TURNURE: Is that helpful?

10 MR. HENDRIE: I guess one more question on least-  
11 cost dispatches. How did you handle scheduling for like  
12 outages? Is that just randomly done in the model?

13 MR. TURNURE: It's generally done as a consistent  
14 availability penalty, if you will. That is, plant  
15 availability in this model really incorporates planned and  
16 unplanned outages.

17 There is also turndown constraints and some of  
18 that sort of thing going on. That gets pretty detailed.

19 MR. HENDRIE: Just sort of a monte carlo  
20 simulation?

21 MR. TURNURE: More like an averaging, really.

22 MR. HENDRIE: Averaging? Okay.

23 MR. WHITMORE: This is Charlie Whitmore at FERC.  
24 Just to make one thing, just to be sure we're clear on it,  
25 as I understand it at least the 15 percent number for

1 reserves is in the base case, and in the various scenarios  
2 that's tuned down to 13 percent. Is that right?

3 MR. TURNURE: Well, yes. Regions start wherever  
4 they are now, and they move towards a more consistent 15  
5 percent, or 13 percent over time.

6 MR. HENDRIE: I mean it says I think 13 percent  
7 by 2020, and so it is kind of unclear when you would start,  
8 you know, when would you get to 14 percent, and when would  
9 you get to 13. It seems like those are--if you don't get to  
10 15 percent until 2020, are you looking at sort of really  
11 being in outyears before you get down that low?

12 MR. TURNURE: I'm pretty sure that's a straight-  
13 line extrapolation. Again, there is a wealth of input and  
14 output data that goes on, and we had to make some very  
15 strong decisions about how much detail to get to with that  
16 type of assumption.

17 Please ask for those in this call and in  
18 comments, or either place, so people can have an  
19 understanding of what information people are interested in  
20 seeing.

21 MR. HENDRIE: Okay.

22 MR. SCHMITZ: This is Gary Schmitz at the  
23 Colorado PUC. I wanted to follow up on a discussion about  
24 transmission costs.

25 Earlier you all mentioned that transmission costs

1       weren't included in the RTO costs. And I understand that.  
2       That is the startup of the RTO.

3               Does the model, though, add transmission? Or is  
4       it a static with respect to transmission as it moves through  
5       time?

6               MR. TURNURE: The way it's used here, it's static  
7       with respect to transmission with the exception of a  
8       scenario assumption of a 5 percent one-time upgrade to  
9       existing links as opposed to new construction. So it's--

10              MR. SCHMITZ: I'm sorry, go ahead.

11              MR. TURNURE: No, I was just saying it's static  
12       basically.

13              MR. SCHMITZ: So through this entire period,  
14       there is no new transmission built in the U.S.?

15              MR. TURNURE: That's my understanding, yes.

16              MS. SHOWALTER: This is Marilyn Showalter on the  
17       5 percent one-time. Is that assumed to cost something, or  
18       nothing?

19              MR. TURNURE: It's assumed to be reflective of  
20       better information, better reporting, better coordination,  
21       more accurate ATC reporting. So therefore it is not an  
22       infrastructure type of upgrade. At least that is my  
23       impression. We sourced that from previous work again.

24              MS. SHOWALTER: So it has zero cost associated  
25       with it?

1                   MR. TURNURE: That's right.

2                   MR. SCHMITZ: This is Gary Schmitz again in  
3 Colorado. I just want to follow up. Would it be true,  
4 then, if transmission was added during this period, then  
5 would your estimates of the benefits of, you know, through  
6 the transmission-only case and the generation response,  
7 would they then even be bigger?

8                   I'm confused about how to square these  
9 improvements with no new transmission. Could you talk to  
10 that a little bit?

11                  MR. TURNURE: Well I'll give it a try. This is  
12 Jim Turnure again at ICF. Basically my view of this would  
13 be that if the model was allowed to build economic  
14 transmission, they would by definition have a net benefit  
15 because the model wouldn't build them if they didn't.

16                  Now if you linked that to the RTO policy and you  
17 said that it's a policy case where you can build  
18 transmission but not in the base case, then, yes, you would  
19 have greater benefits. And this would be equivalent to  
20 saying that something about RTOs or better regional  
21 coordination allowed links to get built that had an overall  
22 system benefit. If that's at all helpful there.

23                  MR. WHITMORE: Which is another way of saying  
24 that regional transmission planning, if it had been  
25 included, would have increased the benefits.

1                   MR. LOWEN: This is James Lowen at the California  
2 Commission. Regarding administrative costs for RTOs going  
3 forward, from what I understand the study did include what  
4 were called startup costs. But on an incremental basis as  
5 compared to the base case going forward, RTO administrative  
6 costs were reckoned to be no greater than current  
7 administrative costs for operating, I suppose for operating  
8 transmission systems?

9                   And our experience in California seems to be that  
10 the costs for operating the ISO, the administrative costs,  
11 are considerably higher than was the case for the utilities  
12 prior to the ISO's existence.

13                   Can you tell me whether I understand your  
14 methodology correctly, and then also what's the basis for  
15 assuming that these administrative costs are not any higher?

16                   MR. TURNURE: Sure. This is Jim Turnure at ICF.  
17 Essentially, I hesitate to call this a methodology exactly  
18 when it comes to operating costs of RTOs. Basically when we  
19 sat down to do the methodology and to think through the  
20 framework and how we should assess those kinds of costs, we  
21 rapidly encountered a very fundamental problem, which was  
22 that we have sort of two differing directions, one that  
23 would increase operating costs and one that would decrease  
24 them. And it struck us very early on that the information  
25 base there was not going to be sufficient to make a very

1 good assessment.

2 So we let it be a wash, but the two  
3 countervailing forces are essentially, one, merger type  
4 savings from consolidation of existing system operators in  
5 control areas, okay? And you can go to merger analysis and  
6 other sources to start to understand how you would approach  
7 that sort as an institutional analysis, if you will.

8 MR. LOWEN: Right.

9 MR. TURNURE: Versus the potential for increased  
10 functionality on an ongoing basis at the RTOs. If you have  
11 market monitoring, certain kinds of market settlements that  
12 aren't occurring now, secondary markets, reserve markets, et  
13 cetera, some of those things are functionalities that the  
14 current systems don't carry.

15 So there's a sort of a countervailing force there  
16 that we in the end decided that it would be beyond our  
17 capacities to be serious and credible to get enough backup  
18 to work those numbers through.

19 So we just sort of tried to be clear about that  
20 in the report.

21 MR. LOWEN: Okay. Thank you. So I understand  
22 those theoretical forces in opposing directions. Did  
23 you--and I'm sorry, I don't remember if the report stated  
24 this or not--did you look at historical changes in  
25 administrative costs for utilities that switched from sort

1 of more of a old-style command and control approach to a  
2 market operation?

3 Did you look at their sort of empirical  
4 observation of changes in administrative costs?

5 MR. TURNURE: No. We really didn't do that.

6 MR. LOWEN: Okay.

7 MS. SHOWALTER: This is Marilyn Showalter. As a  
8 follow-up to that, were all of the assumptions that went  
9 into the model going only one way? That is, an assumption  
10 that something would be more efficient or more beneficial,  
11 and any potential costs that would have gone the other way  
12 were not assumed? Is that right?

13 MR. TURNURE: I'm not sure quite--

14 MS. SHOWALTER: To put it another way, did you  
15 make any assumptions of costs that were offset by the other  
16 assumptions of more efficiency?

17 MR. TURNURE: Well we made an attempt to look at  
18 the initial, the startup costs, the costs to get from the  
19 current situation in the country to a situation where there  
20 are RTOs established throughout the country.

21 That set of costs has a range on it, as well.

22 MS. SHOWALTER: Okay.

23 MR. TURNURE: We developed a set of indicators  
24 based on the current set of ISOs that's operating, and we  
25 used those to extrapolate how much those costs would be if



1       they were incurred for the whole country instead of for the  
2       current set of ISOs. And that range comes into the \$1  
3       billion to \$5.75 billion range.

4               So that is the sort of start-up costs that we  
5       assessed here. Again, that's a range, a fairly wide range,  
6       and it's a question of really infrastructure expectations.  
7       If you wanted to have a more accurate, or not more accurate  
8       but narrower range of those startup costs, you would ask  
9       yourself what do we really know about the RTO formations  
10      that we expect?

11             In other words, the main driver of that cost  
12      spread is fixed infrastructure like control rooms, and  
13      dedicated fiber optic communications infrastructure. So the  
14      model, the business model if you will, of the RTOs has a big  
15      effect on whether you would have lower or higher startup  
16      costs.

17             MR. BROWN: This is Stephan Brown with Oregon.  
18      To follow up on the costs discussion, you mentioned PJM  
19      extrapolated costs to come up with the low estimate, but you  
20      don't mention where you came up with, what you used to come  
21      up with the high estimate.

22             MR. TURNURE: Oh, yes. Well we have a lot of  
23      reports with a lot of different estimates in them. And one  
24      other report that's coming out now that has an equivalent  
25      set, or another set at least that I thought was a nice look

1       was at least the preliminary RTO West Report by Tabors,  
2       Cramanis and Associates. They are taking a very similar  
3       approach with a number of very similar cost indicators.

4               I was actually surprised how similar their set  
5       was to the set that we developed. I guess you would have to  
6       say that there is some debate about where some of those cost  
7       estimates are coming from.

8               And it is really the California experience that's  
9       the high-end driver there.

10              MR. BROWN: Does that mean that you used the  
11       California costs to come up with your estimate for the high-  
12       end costs?

13              MR. TURNURE: Well we are sort of taking a few--  
14       yes, essentially, but there is an averaging going on there,  
15       too. It is not just California. We are taking the set of  
16       different cost indicators and averaging how they come out on  
17       the low end and the high end.

18              MR. HENDRIE: This is Jim Hendrie from  
19       California. I have a question about cost and benefits. The  
20       study has benefits listed, you know, variations from the  
21       base case, and do those include the cost of startup? You  
22       look at the startup costs are the one-time costs up front.  
23       And so when you look at the benefits that are listed, those  
24       would just be generation transmission benefits, and then you  
25       would have--take the startup costs off the top, right?

1 MR. TURNURE: Yes, that's right.

2 MR. HENDRIE: Okay.

3 MR. TURNURE: We left those separate just mainly  
4 for clarity, I suppose.

5 MR. HENDRIE: Okay, so whatever benefits are,  
6 then you could say from this take a one-time subtraction of  
7 startup costs, whatever they are, to get net benefits?

8 MR. TURNURE: Right.

9 MR. HENDRIE: Okay.

10 MR. GALLAGHER: This is Sean Gallagher from  
11 California. Does the study attempt to take account of any  
12 regional variation now? For example, in the West there is a  
13 fairly vigorous regional wholesale market. And so I wonder  
14 are the same generation efficiency increases likely in the  
15 West as might be in other regions?

16 And, similarly, there are differences in the way  
17 transmission is constructed, or in the ground in the West as  
18 opposed to other places. Another sort of variation on the  
19 same question is: The West is a region which has a  
20 substantial hydro portfolio. What is the impact of that on  
21 your generation efficiency analysis?

22 MR. TURNURE: Okay. Well that question has to do  
23 with sort of the uniformity of approach as we went from  
24 region to region in the country.

25 The first broad point I think would be that the

1        model has the same basic market structure for all the  
2        regions that it considers because it's working on a sort of  
3        a spot pool clearing mechanism for dispatch. So that is  
4        consistent.

5                But what is different is both the set of  
6        transmission transfer assumptions which are treated the same  
7        across all the different parts of the country, but are based  
8        on each region's detailed reliability assessments, which  
9        then ICF working for clients is always breaking down these  
10       regions to more detail and building them back up.

11               So we tend to leave subregions there when it  
12       seems to be significant. And so we're treating those things  
13       consistently across the country, but consistently meaning  
14       we're taking the existing on-the-ground infrastructure into  
15       account in a fairly detailed manner.

16               The same kind of comment would apply to hydro  
17       treatment, I think. There is within the model--the way we  
18       handle hydro essentially is sort of a hybrid between some of  
19       it is dispatchable and some of it is not.

20               So we actually have part of that as must-run and  
21       part of that as dispatchable in the regular competitive  
22       dispatch. And I'm sure people could get into interesting  
23       arguments about how much of it should be treated one way or  
24       another, but that is a fairly standard optimization approach  
25       to that hydro issue.

1                   So we are in a position to effect those things as  
2                   a sensitivity analysis, and we have done that quite a few  
3                   times.

4                   Is that good for clarification?

5                   MR. GALLAGHER: That's good for me.

6                   MR. BROWN: I was wondering--this is Stephan  
7                   Brown in Oregon again--I was wondering, have you generated  
8                   results by region for the various cases?

9                   MR. TURNURE: Well what comes out of the model is  
10                  a rather large array of outputs. The short answer is, you  
11                  know, we've got both--the basic economic outputs are  
12                  production costs and energy prices. Actually, energy and  
13                  capacity prices, which we are combining in the report.

14                  And, yes, those are generated for all the  
15                  regions, production costs and energy prices as well.

16                  MR. BROWN: Maybe I can make this simpler. Slide  
17                  25 which shows the--

18                  MR. TURNURE: I'm sorry, could you identify  
19                  yourself again?

20                  MR. BROWN: Stephan Brown with Oregon again.  
21                  Page 25 of the slides--

22                  MR. TURNURE: The presentation?

23                  MR. BROWN: Exactly. I was wondering if that was  
24                  available by region. Or, well, I don't care about the East  
25                  right now, but the West.

1 (Laughter.)

2 MR. TURNURE: Um, I must be looking at the wrong  
3 pages. Are we talking about--I'm sorry, there's two  
4 versions of the presentation.

5 There's a one-page--or we have--I have the flip  
6 version, and I think Chris is looking at the one you're  
7 talking about. Say again. Slide 27, you said?

8 MR. BROWN: Slide 25. It has "System Wide  
9 Production Costs For Policy Cases, Millions, Year, \$2000  
10 net--

11 MR. TURNURE: Right, right, right, right, right.

12 You know, it's a question of--that's really  
13 ultimately a question for the Commission. I mean, does it  
14 exist in the runs? Not only does it exist; it breaks it  
15 down to fuel, and O&M, and capital, and it has all the  
16 details of the production costs in it by region.

17 So really there is a lot of informational  
18 questions being raised, and the Commission is in the process  
19 of collecting them all. So it does exist.

20 MR. BROWN: Stephan Brown of Oregon again. I  
21 think you probably heard from various states that I think  
22 the West is different from most of the rest of the country.  
23 National results, while interesting, do not necessarily  
24 apply directly to the West.

25 MR. MEYERS: This is Ed Meyers. I just might

1 mention that in each of the regional calls, various  
2 Commissioners have asked and staff have asked for regional  
3 results. So that we have taken that into consideration, and  
4 also in the filings that you're going to be making on April  
5 9th that may be something that you may wish to request.  
6 Because as a result of this process, this call, what we are  
7 going to be doing is taking back all the requests and  
8 looking at the requests that could also show up in the  
9 filings and try to organize them and see how many we can  
10 respond to, and what we may have to say, okay, we're going  
11 to do this, and perhaps the rest of it might be something  
12 that the states wish to pursue.

13 But as far as the regional results are concerned,  
14 those appear to be items which we have plenty of data on.  
15 And so if you could make the request based on what you  
16 consider to be the region that you're interested in, or  
17 subregion that you're interested in, that will give us  
18 plenty of basis to go back and help us to make a decision as  
19 to whether we can do that.

20 Another thing I might add, since it came up  
21 earlier on the transmission expansion case, it's come up on  
22 each of the calls and there's been some interest in having a  
23 case run that includes transmission expansion.

24 ICF has said that they could do--they could make  
25 their own assumptions where the transmission lines could go,

1       although that is obviously a state policy. But it could be  
2       done, for example, on a least-cost basis, although if you'd  
3       care to say okay, if you would place the line here or there,  
4       make those kind of assumptions and provide that to ICF,  
5       perhaps in your April 9th filing, then that could also help  
6       us in determining whether we can respond to you in a timely  
7       way.

8                   MR. BROWN: Thank you very much.

9                   MR. MEYERS: Thank you.

10                  MR. GARCIA: Hi, this is Nicholas Garcia with the  
11       Washington Commission.

12                  The calibration part of the analysis assumed that  
13       existing ISOs had no internal hurdle rates. I was wondering  
14       if that assumption had been confirmed in any study.

15                  MR. TURNURE: That's an interesting question.

16                  MR. GARCIA: The reason why I'm asking this  
17       question is because it seems to me that ISOs can give us a  
18       glimpse of what larger RTOs might look like. And if they do  
19       effectively get rid of internal hurdle rates, then that  
20       would lend some credence to the assumptions of this  
21       analysis.

22                  But if they don't, it would cause those  
23       assumptions to be called into question.

24                  MR. TURNURE: That sounds like a follow-up  
25       question to me. This is Jim Turnure again. That is



1 equivalent to asking whether an existing ISO is actually  
2 achieving a very competitive dispatch result, or if there is  
3 still internal bottlenecks and problems that are preventing  
4 that from happening.

5 Is that one way to rephrase that?

6 MR. GARCIA: Yes. That's a fair way to ask that  
7 question. But I don't even think you need to ask whether  
8 they've achieved perfect dispatch, if you will, but rather  
9 are they moving in that direction effectively?

10 MR. TURNURE: Yes, yes. Well I know that the PJM  
11 economic study from a year or two ago certainly made that  
12 claim. I mean that was the one where they were asserting  
13 they had, you know, two or three billion dollars of benefits  
14 already in the PJM region. And that has everything to do  
15 with achieving that kind of result, at least as a trend.

16 But it is certainly a worthy question for a  
17 little more detailed thinking.

18 MR. GARCIA: And another follow-on to that is  
19 whether or not you are seeing the types of improvement in  
20 generation efficiency there that you would expect to see for  
21 the larger RTOs. Are we seeing, relative to neighboring  
22 areas, the average or even the bottom half of the generators  
23 in that area improving their efficiency?

24 MR. TURNURE: That is a statistical comparative  
25 retrospective type of analysis I was referring to earlier,

1       yes.

2                   MR. GARCIA: I understand that. But at least  
3       there you can actually go and look at some data and use that  
4       to confirm the assumptions that you're making here. Because  
5       right now I think that you've heard probably from all other  
6       telephone calls, and this one also, that there's a lot of  
7       uncertainty whether or not a 6 percent generation  
8       improvement is realistic. It may be. It may not be.

9                   I don't know. But it right now is very  
10      uncertain.

11                  MR. TURNURE: Um-hmm.

12                  MR. McMINN: This is Rory McMinn from New Mexico.  
13      I would like to ask a question of Nicholas Garcia in regards  
14      to the question he asked.

15                  Are you suggesting to include the California ISO  
16      in your question specifically? Or are you suggesting that  
17      all of the existing ISOs and have them have these results  
18      done separately by ISO?

19                  MR. GARCIA: The reason, where I got this  
20      question from was on page 36 of the study. On the second  
21      paragraph it says, the last sentence says:

22                  "Existing ISOs (California, PJM, New York, and  
23      New England) are assumed to have no internal hurdle rates."

24                  And so it got me thinking that we have some test  
25      cases that are potentially out there that we can start using

1 to see whether or not the benefits that are assumed in the  
2 larger RTO analysis are indeed realistic, or are there other  
3 problems that are going to prevent us from getting there?

4 And I don't think it would necessarily be a bad  
5 idea at all to include the California and the other ISOs.  
6 But I think at least looking at one of them would be--or  
7 looking at all of them would be a good idea.

8 MR. McMINN: The point I'm trying to make,  
9 Mr. Garcia, and others that are listening, is that I would  
10 like to have that information as well. I think it would be  
11 great to have that. I think your suggestion is well taken.

12 The point I am trying to make is that I think  
13 that if you generate that data it shouldn't be lumped data,  
14 and it should be separated by existing ISO so that we can  
15 see those efficiencies. Because that is an important  
16 question, especially to this State, because we are currently  
17 in the process of siting merchant plants that are building  
18 specifically for California, generating power for the  
19 California market, which is of course referred to as an  
20 economic study.

21 So when you throw this in there, I think that it  
22 needs to be totally separate.

23 MR. WHITMORE: This is Charlie Whitmore at FERC.  
24 I would just like to say that that is a very intriguing set  
25 of suggestions, and the comments that you file I hope will

1 include that. It is not something that we are going to be  
2 able to do in the next little while.

3 But it is a great set of ideas to have on the  
4 table, and I hope you keep them there.

5 MS. SHOWALTER: This is Marilyn Showalter. This  
6 is a conceptual comment, really, rather than a question, but  
7 in addition to seeing whether the existing ISOs become more  
8 efficient, you would want to know what their efficiency  
9 level was when they started out.

10 In other words, if you saw a lot of progress in  
11 one area because of an ISO, it might be from a very  
12 inefficient starting point. And if you take another area  
13 that starts with a more efficient starting point, do you  
14 have any basis to think that you're going to reach the same  
15 kind of increment?

16 On the other hand, if you had two areas, one with  
17 an ISO and one without, and each were the same degree of  
18 inefficiency, and one got better because of an ISO, it might  
19 tell you something. If it didn't get better because of an  
20 ISO, that also might tell you something.

21 MR. HEMSTAD: This is Dick Hemstad in Washington.  
22 Take the illustration in the Pacific Northwest where  
23 Bonneville provides 70 percent of the transmission now. At  
24 least intuitively I start with the assumption that the  
25 likelihood of significant increases in efficiency would be

1       less there than in some other parts of the country where  
2       there are almost deliberate barriers to efficient  
3       transmission.

4               MR. TURNURE:   This is Jim Turnure.   Well clearly  
5       if you were to undertake that sort of analysis, one of the  
6       first important questions would be what is your indicator of  
7       efficiency?

8               And again you can have quite a few of them.  
9       Anything from the cost per megawatt hour in a region to the  
10      running costs of particular plants to their physical sorts  
11      of efficiency measures.

12              It is always very important to know what your  
13      baseline is, and is everyone dropping the same, or are they  
14      converging to some common point.   That is an important  
15      learning exercise in those sorts of analyses.

16              MR. WHITMORE:   This is Charlie Whitmore at FERC.  
17      I just reiterate the thought that any kind of specificity  
18      and detail that you can suggest in your comments about how  
19      this analysis could be best performed, or what pitfalls  
20      might be in doing it, or whatever, I think would be  
21      extremely helpful.

22              MR. HENDRIE:   This is James Hendrie in  
23      California.   I guess this is a sort of follow-up question.  
24      Native load was not on the treatment of native load?   So you  
25      assumed that native load would be economically dispatched

1       regardless of where it ended up?

2               So I guess the question is: How did you treat  
3       native load and existing contracts?

4               MR. TURNURE: This is Jim Turnure again at ICF.  
5       Essentially the model has the capability to handle various  
6       sorts of contracts, although it can be extremely complicated  
7       at times.

8               For example, we do often model must-run type  
9       contracts, whether they're requirements' contracts or that  
10      sort of regulatory type contracts, or reliability based  
11      contracts on a unit basis.

12              When it comes to native load, you have some  
13      decisions to make in terms of the modeling exercise like  
14      this. And you can think of native load as one type of  
15      contract. It's sort of a simplifying concept that helps you  
16      think through the issues there.

17              So let's say that native load is a form of a  
18      contract. The real question is: Does it affect dispatch or  
19      doesn't it? And the way we have handled it here, we have  
20      made the assumption but I think it is very plausible and we  
21      prefer to do it in our normal wholesale practice as well,  
22      that native load requirements in effect do not affect the  
23      competitive dispatch within a region, or the economic  
24      dispatch within a region.

25              The argument then becomes, you know, what about

1 the allocation of the cheaper power, or the more expensive  
2 power. But that becomes much more of a regulatory state-by-  
3 state type of debate.

4 So we have handled native load here as being  
5 equivalent to competitive or economic dispatch, and I will  
6 leave it at that. I mean this has been the source of much  
7 discussion. So people may want to pick up on that. I don't  
8 know.

9 MR. HENDRIE: And the qualifying, like qualifying  
10 facility contracts, are modeled already as being sort of  
11 must-take, or must-run?

12 MR. TURNURE: Yes. That's generally how it is.  
13 It's like a constraint that constrains a unit to run even if  
14 it's more expensive.

15 MR. HENDRIE: And one more question kind of  
16 related to native load. Does this assumption, does the model  
17 include municipal utilities or not? How are they treated in  
18 this?

19 MR. TURNURE: There isn't a distinction that I'm  
20 aware of. There might be particulars of their contract  
21 status that would be handled in a similar fashion to what  
22 I've described, but as far as I'm aware there is no big  
23 distinction for, you know, LADWP or the other municipals.

24 MR. HENDRIE: So just to be clear, the model  
25 assumes then that municipal utilities or government entities

1       like EPA would be part of an RTO and would be participating  
2       in dispatch according to the way the model is run. Right?

3               MR. TURNURE: Yes. The units, the plants  
4       themselves, are all affected by the dispatch unless there is  
5       some specific contractual limitation that we have been  
6       reflecting here.

7               There is no institutional sort of limitation like  
8       that.

9               MS. MOKENE: This is Margaret Kathy Mokene with  
10       the New Mexico Commission.

11              Jim Turnure, I have a question about your  
12       schematic on page 63 of the report. Could you just briefly  
13       review how you arrived at your qualitative result of shifts  
14       in power flows in the Western interconnections?

15              One specific example I am interested in is the  
16       4.3 terawatt shift from the AZNM subregion to the SOCAL  
17       subregion. Page 63 shows that.

18              MR. TURNURE: Yes. Let me just point out, these  
19       schematics are things which you don't often see in this sort  
20       of report. We felt that we should include them because we  
21       look at the interregional transfers very often to understand  
22       what is happening in model runs and why.

23              So we thought, as we explained these results  
24       amongst ourselves, to include this, maybe it would confuse  
25       some people, but maybe it would be a helpful piece of



1 information.

2 Essentially this particular map, if you will, on  
3 page 63 of the study is showing you the base case transfers  
4 and the policy case transfers for the Western regions in  
5 2006.

6 MS. MOKENE: Right--

7 MR. TURNURE: Oh, wait. Which version are we  
8 looking at?

9 MS. MOKENE: I wonder if you could provide it  
10 either now or maybe we could ask for this in comments, more  
11 detail on how you arrived at this interesting conclusion.

12 MR. TURNURE: Well, if we are looking at the AZNM  
13 transfer to SOCAL in particular, that is essentially what  
14 the qualitative discussion is talking about.

15 The way that we approached this from a  
16 calibration standpoint led to a certain amount of--we  
17 essentially had to get California to generate the way it  
18 actually generated in a recent year.

19 And in order to do that, we had to make them  
20 generate a little bit more than the model would optimally  
21 like to generate. And when we reduced those interregional  
22 hurdle rates, or trade barriers, in fact what happened was  
23 SOCAL picked up a series of imports both from the Pacific  
24 Northwest and from Arizona-New Mexico.

25 And you can actually see a little bit of that

1 coming in addition to AZNM from that central NWPPE East  
2 Region. So that is almost like a wheel-through going on  
3 there where they are generating a little bit more in the  
4 interior West, and that is sort of flowing through Arizona  
5 into the SOCAL area. That is the sort of effect you see on  
6 a broad scale.

7 Is that helpful at all?

8 MS. MOKENE: That is helpful, Jim. I'm just  
9 wondering if this is truly based on the reduction in  
10 interregional trade barriers, or I guess in this case  
11 intraregional would be a better word, or if you are taking  
12 into account the firmly planned builds of, for example, the  
13 seven merchant plants that are forecast for New Mexico.

14 MR. TURNURE: I guess I would--

15 MS. MOKENE: --that come from.

16 MR. TURNURE: I'm sorry. I guess I would say  
17 that over time the influence of new generation becomes more  
18 important in these because the model will locate generation  
19 where, for example, delivered gas prices are lower, or where  
20 construction costs are lower.

21 And so over time the increased liberalization of  
22 the grid basically allows that to go on a little bit more  
23 than in the base case. So for example those merchant plants  
24 get to come in. The model may very well locate additional  
25 gas capacity in those regions like AZNM in order to reach

1 the California export market if it's cheaper to locate the  
2 plants there.

3 So that is the sort of phenomena you would  
4 expect.

5 MS. MOKENE: Okay. I was just interested because  
6 your time horizon is relatively short on this particular  
7 graphic. It's 2006. And there is a fairly substantial  
8 shift here in power flows between these subregions. So I  
9 was just wondering how you got there so quickly.

10 MR. TURNURE: Yes. Well in the near term it is--  
11 in the near term you are picking up a lot of transfers even  
12 with basically the same installed generating base. And you  
13 are really backing down units in SOCAL.

14 MS. MOKENE: Okay. That's very helpful. Thank  
15 you.

16 MR. TURNURE: Um-hmm.

17 MR. McMINN: Rory McMinn. Just one--

18 MR. MEYERS: Could you speak up a little bit,  
19 please?

20 MR. McMINN: Can you hear me?

21 MR. MEYERS: Yes. Now we can.

22 MR. McMINN: Jim, this is Rory McMinn. I just  
23 have to throw this in after the comment that you made to  
24 Margaret. You factored in low cost of construction, low  
25 cost of delivered gas, but you didn't factor in the manana

1 factor in New Mexico.

2 (Laughter.)

3 MR. McMINN: Sorry, Jim. I just had to throw  
4 that in.

5 MR. TURNURE: I guess I'll take that as a gentle  
6 criticism.

7 MR. McMINN: Just a side joke, Jim. Sorry.

8 MR. TURNURE: Okay.

9 MR. FREEMAN: Jim, this is Brice Freeman in  
10 Wyoming. Looking at this schematic on page 63 and going  
11 back to the fact that I think you've said that the model  
12 didn't include transmission expansion, transmission capacity  
13 expansion, so this assumes that the fact that there isn't  
14 any capacity from Arizona-New Mexico across to Southern  
15 California right now isn't a problem.

16 I mean it kind of ignores that problem, doesn't  
17 it?

18 MR. TURNURE: I'm not quite sure what you're  
19 getting at there.

20 MR. FREEMAN: Let's see. Who's on the phone from  
21 Arizona?

22 (No response.)

23 MR. FREEMAN: Still? Nobody on the phone still  
24 from Arizona?

25 (No response.)

1 MR. FREEMAN: Jerry Smith, are you there?

2 (No response.)

3 MR. TURNURE: I mean--this is Jim--we are being  
4 asked to check and recheck links and transfer capabilities,  
5 and that is no surprise to me that you've picked one  
6 particular one to take a look at there.

7 MR. FREEMAN: Well I think the same could be said  
8 for, you know--may potentially be said for every line that  
9 is on these pages.

10 If you don't contemplate any transmission  
11 expansion, it is hard for me to understand how you get these  
12 transfers accomplished.

13 MR. TURNURE: Well, and you're speaking from  
14 Wyoming? Is that right?

15 MR. FREEMAN: Right.

16 MR. TURNURE: Right. And you look at things like  
17 the Western Governors Association, and the Western  
18 infrastructure is pretty sparse and pretty dispersed, and it  
19 does make a big difference which of these paths we're  
20 talking about.

21 I try to make the point that this is not a  
22 reliability study, per se, and one could look at the  
23 specific links in regions with much more of a power flow  
24 model or an engineering approach and find out if there are  
25 some important issues with more detailed or disaggregated

1 looks at what this type of power flow shift would mean for  
2 particular regions and for infrastructure and reliability.

3 This can't substitute for that but it can inform  
4 it, is the way I would characterize that.

5 MR. FREEMAN: Well I guess I was just--you know,  
6 we've been talking for, at least for several months if not  
7 for over a year about various projects and various paths in  
8 the Western part of the United States, and the conceptual  
9 transmission plan certainly informs that, but the fact of  
10 the matter is there are significant congested paths in the  
11 Western United States and I don't think the model, from what  
12 you have said today, addresses that issue at all.

13 MR. TURNURE: This is Jim again. The only thing  
14 I would really say is that, again, ICF as a firm is doing  
15 work with clients throughout the country on a continuous  
16 basis, typically dozens of projects at any one time.

17 So we are very experienced with taking--I mean we  
18 have Power World and GEMAPS. We have other modeling systems  
19 that are engineering in nature and are more detailed.

20 We are always taking these links down and  
21 breaking them apart and comparing them to power flow  
22 conditions, and that is part of our qualifications.

23 So again they are very live issues, very  
24 legitimate issues, and it would be well worth considering  
25 what the meaning of that is in more detail. But that is

1 something that we are familiar with as an issue, and we do  
2 the best job we can with it.

3 MR. FREEMAN: All right. Thank you.

4 MR. HENDRIE: This is Jim Hendrie. I wanted to  
5 ask a quick question about Demand Response in this.

6 The model assumes that the peak gets reduced by  
7 3.5 percent. So that would be the total systemwide peak for  
8 all the submarket segments of demand. Right?

9 MR. TURNURE: For all the peak demand, yes.

10 MR. HENDRIE: And how many hours is this assumed  
11 to happen for? Just one hour, or ten hours, or a hundred  
12 hours, or--

13 MR. TURNURE: Well that depends I guess on how  
14 big the peak segment is and how many hours are in the peak  
15 segment of the ten segments. I don't know that number off  
16 the top of my head, I'm afraid. Good question.

17 MR. HENDRIE: Could you give a ballpark? I mean  
18 would 100 hours be a reasonable estimate?

19 MR. TURNURE: Probably, yes. Something in that  
20 range.

21 MR. HENDRIE: Okay. And it is just assumed that  
22 the peak gets reduced? There's no discussion about what  
23 price is needed to get this peak reduction?

24 MR. TURNURE: You will see some more detail on  
25 that when we produce the more detailed assumptions document.

1 We did a little statistical exercise about that, and that is  
2 the result of the spreads between the segmental prices in  
3 each region.

4 It says if people experienced a Demand Response  
5 or a price elasticity within the peak-to-offpeak price  
6 spread within their own region. So that depends on what the  
7 base case set of segmental prices really is.

8 MS. SHOWALTER: This is Marilyn Showalter. How  
9 are you making the connection between wholesale prices and  
10 retail response? What's the nexus or mechanism by which  
11 there is a response?

12 MR. TURNURE: Well maybe there's other Commission  
13 staff, maybe not even in this room, who could address that  
14 better. The Commission has been talking about this issue  
15 for some time, and in fact has fairly recently issued a  
16 staff paper on this subject.

17 If you look over the material that is available  
18 on the relationship between regional markets and Demand  
19 Response, you could make the argument--again, we're doing  
20 this in a scenario analysis context, and it is more of a  
21 what-if approach.

22 But you certainly could make the argument that  
23 demand-response programs first of all can be implemented in  
24 a fully integrated environment, so there is no necessary  
25 connection between retail competition and demand-response



1 programs.

2 That is to say, a fully integrated utility can  
3 offer price--time varying rates and other things that offer  
4 price signals to customers without having a competing  
5 service provider take on that role. So there is not a  
6 necessary retail access dimension to it, per se.

7 Secondly, one thing that is coming out of  
8 market monitoring and mitigation is a very heavy emphasis on  
9 Demand Response, so heavy that it may become a part of that  
10 aspect of regional and RTO market policy that you just can't  
11 escape certain kinds of bad price effects without having  
12 price response in there.

13 I'm not sure institutionally what that will  
14 amount to in terms of the details, but this study is  
15 reinforcing an ongoing perception that some type of fairly  
16 substantial Demand Response programs are going to have to be  
17 part of a successful wholesale market because you can't just  
18 have supply side competition in the end.

19 MR. HENDRIE: Can you elaborate a little on the  
20 peak--I think this is a good question of how the wholesale  
21 gets translated into the--

22 MR. MEYERS: Who is speaking, please?

23 MR. HENDRIE: This is Jim Hendrie with the PUC  
24 following up.

25 MR. MEYERS: Thank you.

1                   MR. HENDRIE: So are you saying then the model  
2 would give you a wholesale price of \$300, and then you  
3 assume there is some elasticity, that that reduces peak  
4 demand by an extra cent, or something? Is that the way the  
5 model is working?

6                   MR. TURNURE: It is more like you would take the  
7 spread between the off-peak prices in a region and the on-  
8 peak prices. So it might be a spread between \$20 a megawatt  
9 hour and \$50, \$60, \$80 a megawatt hour, and you treat that  
10 as a price delta, and you apply what is actually a quite low  
11 price elasticity to that.

12                  MR. HENDRIE: So the model then I guess--the  
13 model really doesn't do well for the distinction like peak,  
14 off-peak prices, but you are saying that when you run the  
15 model you end up with peak prices that seldom get above \$80  
16 or so? It's more the spread between the on-peak and the  
17 off-peak that is driving this reduction?

18                  MR. TURNURE: Yes. Chris MacCracken may have  
19 looked more recently at some of our typical on-peak prices,  
20 but it ought to be set by the running cost of the most  
21 expensive unit and some kind of capacity surcharge, if you  
22 will.

23                         It is not really a market power infinite demand  
24 type of a peak price system.

25                   MR. HENDRIE: So the market would clear, at the

1 most, say \$100? Somewhere in that ballpark range, then,  
2 right?

3 MR. TURNURE: You would think something like  
4 that, yes.

5 MR. HENDRIE: Okay. Thank you.

6 MR. GALLAGHER: Jim, following up on Commissioner  
7 Showalter's question a minute ago, I thought she had asked a  
8 simpler question, which was just that in your Demand  
9 Response case are you just basically assuming that the  
10 wholesale price that comes out of the model is passed  
11 through to the retail consumer?

12 MR. TURNURE: Oh, we actually in order to sort of  
13 come up with a simple ballpark figure for this assumption,  
14 we allowed half of the customers in each region to have this  
15 kind of elasticity response.

16 MR. GALLAGHER: Basically real-time pricing for  
17 half of the consumers? That's what you assumed?

18 MR. TURNURE: Right.

19 MR. GALLAGHER: Okay.

20 MS. SHOWALTER: This is Marilyn Showalter again.  
21 If the purpose of the study--and maybe it's not--but if the  
22 purpose of the study is to show whether RTOs are a good  
23 idea, then it seems to me what you've done here is assumed  
24 Demand Response and showing it, that Demand Response shows  
25 an efficiency, therefore RTOs are a good idea. Or show the

1 efficiency.

2 But then the justification for putting it in  
3 there is that if we had RTOs there would have to be some  
4 Demand Response.

5 So I'm just having--it seems like a cart before  
6 the horse. Or is it just to say, does it amount to saying  
7 there would be more volatility in the wholesale market,  
8 therefore that volatility would be unbearable for the  
9 utilities, so the states would have to find a way to pass  
10 these costs on more directly to the customers?

11 MR. TURNURE: Well again this is Jim at ICF  
12 Consulting. Well, Chairman Showalter, I think that this  
13 gets back to your original set of comments, which is  
14 essentially the issue of certainty, or probability, or  
15 proof, if you will, of what the connections really are here  
16 between the policy and the outputs.

17 And I think that that is a very good place for  
18 this debate to be. That is just my opinion. Maybe you  
19 needed a different consultant to try to tell you that, you  
20 know, this all has to happen.

21 I'm a little too much of a social scientist in  
22 the end to be wanting to go there, and that is not the way  
23 we handled this. We are trying to be very clear about very  
24 complicated potential impacts, but we are relying on that  
25 word "potential" here.

1                   And it is up to the Commission, which has been on  
2                   record in many instances talking about their belief in these  
3                   types of effects. You could do more of an economic  
4                   literature review approach, and I think you would find many  
5                   hundreds of articles and court cases in fact pointing to  
6                   competitive incentives in these types of contexts.

7                   Those are the sorts of things you could then do  
8                   as follow-up here, but we bit off a pretty large piece of  
9                   the issue here, which is what connections in the market make  
10                  the most difference for economic outcomes. And what  
11                  potentially unexpected effects might you find if you take  
12                  dynamics into account here.

13                  MS. SHOWALTER: Well I think it probably does go  
14                  back, I bring it back to the word tautology. I think that  
15                  is what this is. That is, your study says if an RTO is more  
16                  efficient, then it will be more efficient. That is what it  
17                  says.

18                  I heard somebody say it's not a tautology, but  
19                  you should think about it because I think that's exactly  
20                  what has happened here. This is a perfect example.

21                  If RTOs produce Demand Response that equals X,  
22                  then it will be more efficient. Well that is a truism. But  
23                  maybe this is really just a debate, or a difference about  
24                  what this kind of study, if undertaken, in general is  
25                  supposed to help people to do.

1           I think what it was supposed to help people to do  
2   is decide whether RTOs were correct, and how to implement  
3   them, not to show that if you assume it's more efficient it  
4   will be more efficient. Because it doesn't get you to the  
5   threshold question, or decision point of is it better than  
6   the current system? Or how are these efficiencies due to an  
7   RTO versus how are these efficiencies possible, potential  
8   under our current system.

9           MR. WHITMORE: This is Charlie Whitmore at FERC.  
10   I think you are quite right that part of this does go to the  
11   issue of what this kind of study could or should show.

12           I think part of it also goes to a somewhat  
13   different issue, which there are sort of two questions  
14   involved here. One of them is, that if an RTO worked the  
15   way it is supposed to work, what would the potential gains  
16   be? And I think that is the question that the study sets  
17   out to answer and comes up with some answers.

18           There is a separate set of questions of whether  
19   RTOs as they are actually proposed will in fact do that.  
20   And there you have a problem any time you are doing an  
21   innovative approach to things. The gap between the  
22   aspiration and what turns out to be the reality is extremely  
23   difficult to assess quantitatively ahead of time through  
24   this sort of thing.

25           So I think it leads to two separate discussions.

1       One is: If this worked properly how good an idea would it  
2       be? And which parts of it are most important?

3               And the separate question is: Can it work  
4       properly? Is it likely to work properly? And so forth.

5               And then I think there is a third sort of  
6       question that comes in which is: Could you achieve similar  
7       results as quickly through other means?

8               And I think that in particular gets into an issue  
9       of the relationship between this and Standard Market Design  
10      because what the study shows me, at least, is that there are  
11      considerable gains to be gotten from having more competitive  
12      wholesale markets on both the supply and the demand side.

13              And that those effects are larger than the  
14      transmission effects, especially when you don't add extra  
15      transmission lines to the equation.

16              Our belief all along has been that you wouldn't  
17      be able to get those competition benefits unless you had a  
18      regional standardized platform on which to build. That is a  
19      question that we need to discuss further, and I agree with  
20      you this study does not touch those.

21              MR. MEYERS: Well I'll tell you what. We are  
22      kind of running out of time, but I want to give Jim Turnure,  
23      since Marilyn has asked the same question I think maybe six  
24      times, a chance to answer.

25              Is this a self-fulfilling study? In other words,

1       did you assume certain benefits as part of the design of the  
2       study? And then did you simply measure what those benefits  
3       were? And then, voil , you've got your answer that you  
4       designed in in the first place.

5                   Is that kind of what you're saying, there,  
6       Marilyn?

7                   MS. SHOWALTER: Yes, I think that is another way  
8       to put it.

9                   MR. MEYERS: Okay. We have a couple of minutes.

10                  MR. TURNURE: Well I am happy to take the  
11       question on. It is Jim Turnure again. I would--the way I  
12       would put it is as follows:

13                  There is a fairly long set of studies of  
14       competition in the electric power sector. There is a lot of  
15       information in all those previous sets of work. A lot of  
16       the effort here was not so much to make up a number and put  
17       it in as an assumption, but rather to go around  
18       systematically finding the best information we could that  
19       was pre-existing, and use that as a set of assumptions for  
20       this study.

21                  Now we did not undertake a probability approach  
22       in this study. Nor did we undertake a comparative cross-  
23       industry systematic literature review. So therefore we do  
24       not have either some--you could put a set of numbers on this  
25       that had a probability judgment to it that would be pretty



1 subjective, and you could have a big pile of what you might  
2 hope would be persuasive evidence one way or the other on  
3 the question of whether competitive power markets actually  
4 get efficiencies or not.

5 Those are steps people could choose to take in  
6 the future. What we have done here is, rather than attempt  
7 to eliminate uncertainty, put uncertainty into a  
8 quantitative context.

9 And so in my view we have separated out which  
10 benefits lead to the most bang for the buck, and I think  
11 that that has been within its own context a useful enough  
12 exercise.

13 I again would wonder what, you know, what people  
14 would like to see, and I would hope the Commission would be  
15 welcome to people asking for what kinds of evidence they  
16 would be satisfied by.

17 MR. GARCIA: Jim, this is Nicholas Garcia again  
18 with the Washington Commission.

19 I guess it strikes me that a lot of the studies  
20 that you refer to as the basis for your 6 percent generation  
21 improvement, as an example, also made assumptions. And they  
22 made assumptions about what sort of improvements are going  
23 to be made.

24 And it seems to me that we have those assumptions  
25 built upon assumptions. And they may turn out to be right.

1 I don't know. But it seems to me that that is what led me  
2 to the suggestion I made earlier, which was let's look at  
3 some examples that have taken place to see whether or not  
4 they are showing the type of results that we are assuming to  
5 be here.

6 MR. TURNURE: I don't know if it's my role to say  
7 that's an excellent suggestion--

8 MR. RUSSO: It is.

9 MR. TURNURE: --but it is.

10 MR. MEYERS: Okay, are we pretty much wrapped up  
11 here? I hope this call has been somewhat helpful as you go  
12 ahead and prepare your filings for April 9th.

13 I might mention that the transcripts will be  
14 posted in 10 days. Those are free transcripts. You can buy  
15 them earlier, if you want to.

16 We are going to be sending around pretty soon  
17 some Demand Response materials coming out of the FERC  
18 Conference that we had recently for your review. And I  
19 would like to further mention that this past Wednesday--that  
20 would be March 13th--FERC indicated that it was going to be  
21 releasing a working paper on Standard Market Design.

22 That should be up on the web site along about  
23 now. It may be there right now. If it's not, it's going to  
24 be there in a couple minutes.

25 Is there anything else--oh, Charlie, you wanted

1 to say one other thing?

2 MR. WHITMORE: Yes. I would like to say that  
3 you've given us a great deal to think about. And while the  
4 debate back and forth about tautology is not a terribly  
5 comfortable one from this end, we have heard what you have  
6 said and we are thinking about it.

7 I think some of the other suggestions about doing  
8 some empirical work on existing ISOs and maybe some more  
9 things in other countries is an excellent one.

10 So it has been I think a very productive  
11 discussion from our point of view. So thank you.

12 MR. HUGHES: This is Herb Hughes in New Mexico.  
13 I want to add to that. I think it has been very productive.  
14 I just hope you will see this, as I do, but particularly  
15 after this discussion, as a work in progress.

16 MR. MEYERS: Good. We certainly do. And your  
17 comments have certainly registered.

18 We have one more?

19 MR. RUSSO: Yes. This is Tom Russo. I would  
20 like to ask all of the participants to really, when you look  
21 at the results of this report, sort of factor in Standard  
22 Market Design, Demand Response, and RTOs, all under the same  
23 umbrella, if you will. Because I think some of the results  
24 of this report could inform us on Standard Market Design, as  
25 well as RTOs in the future.

1                   So it is just not limited, even though the report  
2                   is dealing with RTO policy, a lot of the things in the  
3                   report I believe go well beyond just whether there should be  
4                   an RTO. Standard Market Design may be an interim step in  
5                   the evolution to an RTO.

6                   I just leave you with that.

7                   MR. MEYERS: Any wrapup thoughts from the states?  
8                   Or is that about it?

9                   MR. HENDRIE: This is Jim Hendrie with just a  
10                  quick follow-up to that. I think also you can look at the  
11                  model and say, if you assume the model exists and you want  
12                  these benefits, then that may drive what market design  
13                  should do, which it may or may not be doing.

14                  MR. MEYERS: Okay. Well thank you all very much.  
15                  It has been very useful from this end, and have a great  
16                  weekend.

17                  (Many voices say 'thank you.')

18                  Whereupon, at 4:06, Friday, March 15, 2002, the  
19                  telephone conference in the above-entitled matter was  
20                  adjourned.)

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